RECRUIT CLOTHING SUPPLY CHAIN ASSESSMENT

PROJECT REPORT

MARINE CORPS RECRUIT DEPOT

PARRIS ISLAND, SOUTH CAROLINA

AUGUST 28, 2001

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1.0   EXECUTIVE SUMMARY

The Apparel Research Network (ARN) directed the completion of this project in support of Defense Supply Center Philadelphia (DSCP) operations to provide an initial assessment of the operations at the Marines Corps Recruit Depot-Parris Island (MCRD-PI) as part of an overall process in preparation for the conversion of military uniform supply chain retail inventory owned by MCRD-PI to DSCP ownership as "Wholesale Local Inventory." Under the concept of operations, Wholesale Local Inventory is owned and managed by DSCP with installation of QLM/Local software linked to VIM-QLM/Central for decision support.

Key findings from this assessment included:

> ➤ Key personnel at MCRD-PI are enthusiastic regarding the conversion to DSCP ownership of the retail clothing inventory. A willingness to make the necessary changes was expressed by management.

> ➤ Concerns regarding the additional time required to fill out scan forms are valid. This is a new requirement for the clothing process and recruit training time is valuable. Any requirement that has the potential for consuming additional recruit training time is viewed with suspicion, unless concrete benefits can be realized.

> ➤ The QLM/Local system has now be installed in six Recruit Training Center clothing activities. Successful transition to wholesale local inventory operations will depend on the amount of training provided and the willingness of MCRD-PI personnel to change procedures and mindset.

ARN systems are installed outside the firewall and thus there is no impact on existing legacy systems. The key objective for systems to be developed as part of the first phase of effort to install ARN systems and solutions is to generate accurate recruit issue data.

2.0 PROJECT OBJECTIVES & SCOPE

2.1 Project Objective

The objectives for this Short Term Project were to conduct an in-depth assessment of the recruit clothing supply chain at the Marine Corps Recruit Depot Parris Island (MCRD-PI), identifying the legacy systems, the data flow, and the existing operational procedures. Specifically, the objectives of the MCRD-PI Assessment were to provide for a thorough and in-depth look at all activities and operational systems to identify and document the following:

> Operations and processes currently in use to support the MCRD-PI Uniform Supply Chain;

> Information and operational systems interfaces that must be addressed; and,

> Identification of any Auto Data Scan Forms changes that must be incorporated for a successful implementation at MCRD-PI.

Completion of the assessment was directed to insure the most efficient and comprehensive QLM/Local implementation plan and Auto Data Scan Forms implementation for MCRD-PI. By completing this assessment, several benefits would be provided, including:

> Enhanced ability of DSCP Item Managers to accurately plan production requirements;

> Provide the data necessary to allow VIM-QLM/Central to accurately predict future wholesale local inventory requirements; and,

> Ensure the proper amount of inventory at each MCRD utilizing Just-In-Time inventory methodologies.

Additionally, this data will allow the DSCP Item Managers to better predict future requirements for all new items that will be added to the Recruit bag in the future.

2.2 Project Scope

The project scope was comprised of the following elements and activities.

2.1 Initiate an in depth assessment of the recruit clothing supply chain as it exists at MCRD-PI, and research differences from MCRD-SD, the legacy system(s), the data flow, and existing operational procedures. The assessment research will determine the minimum work necessary

for transition of MCRD-PI retail stock to wholesale local inventory and management thereof by the DSCP Item Managers.

2.2   A report will be provided to the ARN Program Manager detailing recommendations and a plan and alternatives for the transition

3.0   DIFFERENCES BETWEEN MCRD-PI AND MCRD-SD

MCRD-SD converted to a Wholesale Local inventory activity on May 1, 2001. All clothing inventory, with the exception of those items in the Cash Sales store and clothing recovered from exchanges and recruit discharges is owned by DSCP.

3.1   Recruit Load and Non-Recruit Customers

3.1.1   MCRD Parris Island

MCRD Parris Island (PI) processes approximately 20,000 male recruits and 1,500-2,000 female recruits per fiscal year.

Other customers supported include the Recruit Training Regiment for bulk chevron sales, active duty Marines for supplemental uniform issues, and replenishment of the Cash Sales Store.

3.1.2   MCRD San Diego

MCRD San Diego (SD) processed approximately 20,000 male recruits per fiscal year. MCRD-SD does not process female recruits.

Other customers supported include the Property Control Office for the sale of uniform items for Drill Instructor School Students, Recruiters School male and female students, the Recruit Training Regiment for bulk chevron sales, active duty Marines for supplemental uniform issues, the replenishment of the Cash Sales Store, and assorted local military units who bulk purchase uniform items.

3.2   Inventory Policies and Procedures

3.2.1   MCRD Parris Island

MCRD Parris Island is a retail level inventory and follows the policies and procedures of the Marine Corps Uniform Material Management System (MUMMS) legacy system and the Navy Capital Stock Fund. As such, PI owns the on hand inventory assets and is responsible for all operational functions such as budgeting, replenishment planning and execution, setting inventory levels, inventory management and control, issues management, and cash sales.

3.2.2 MCRD San Diego

Transition to DSCP ownership of the inventory at MCRD-SD eliminated the MUMMS and Navy Capital Stock Fund operations. Inventory policies of the wholesale system apply. San Diego Clothing personnel perform daily inventory management and control activities for DSCP. Recovered clothing and cash sales operations continue to be performed under Marine Corps policies and procedures. Budgeting, replenishment planning and execution, and establishment of inventory levels are controlled by DSCP. Issues management is performed by MCRD-SD, but is now reported daily, to DSCP, by stock number and quantity.

3.3 Legacy Systems and Interfaces

3.3.1 MCRD Parris Island

Parris Island uses MUMMS as the inventory management system. MUMMS is used to requisition, issue, and receive stocks. Line item accounting is maintained only at the bulk inventory level. Once assets are moved to the Issue Points/Lines, visibility of the inventory is lost. Issues to recruits are reported by dollar value only. Quarterly inventories are used to validate the dollar value of recruit issues and adjust the inventory balances at the Issue Points.

MUMMS interfaces with the DSCP SAMMS, via standard MILSTRIP transactions for replenishment actions and the Marine Corps financial system via a 3270 mainframe computer.

BIFRS-Retail, developed by the Clemson Apparel Research (CAR), contains a decision support system capability where historical data and other user-determined parameters are used to compute replenishment requirements. BIFRS-Retail also contains data retrieval and manipulation capability to produce management information screens for inventory managers, called BIFRS-Lite. Data displayed is due-in order status, tariff and usage data, current on hand in bulk inventory, and recent transfers of inventory to issue points. Inventory and document status data is imported from MUMMS and the AAVSDatamart are into BIFRS-R to produce the BIFRS-Lite screens and to calculate the recommended buy lists.

3.3.2 MCRD San Diego

The inventory control system at San Diego is QLM/Local which, in conjunction with other ARN developed supply chain systems, provides the San Diego site information on replenishment actions and status, inventory balances, and reorder objectives set by DSCP. User input is limited to processing receipts, inventory adjustments, and administrative housekeeping functions.

QLM/Retail, the current legacy system, is used to manage the Marine Corps-owned inventory in the Cash Sales Store and to process recovered clothing. It is also the system for reporting all

issues (sales) of DSCP-owned inventory. Issues to recruits are captured using optical imaging forms. Issues to other customers are performed using the issue functions of the QLM/Retail system. Issues are converted to J0A transactions and transmitted by FTP process to DSCP via QLM/Central. The J0A transaction serves two purposes. One, it is used to decrement the on hand inventory reflected in the QLM/Local system. Two, it serves as supporting data for the monthly billing DSCP submits to the Marine Corps.

4.0 DESCRIPTION OF CURRENT OPERATIONS

MCRD-PI retail clothing procedures are in accordance with Marine Corps directives governing the operations of a Navy Working Capital Stock Fund inventory under the Marine Corps Uniform Material Management System (MUMMS) operated by the Direct Support Stock Control Branch of the Supply and Service Division.

4.1 Organization and Manpower

The Clothing Branch is part of the MCRD-PI Supply and Service Division. It consists of an Administration and Operations section, a Phase 1 Issue Point, a Phase 2 Female Issue Point, a Phase 2 Male Issue Point, a Cash Sales Store, and a Storage and Redistribution section.

4.1.1 Branch Head and Administration and Operations Section

This section provides for the Branch Head and Clothing Chief, as well as the daily operational control of the Clothing Branch, inventory management and replenishment, inventory control, and training of assigned Marines.

The section is staffed with 4 Marines and 5 civilian employees.

4.1.2 Phase 1 Issue Point

This section issues the basic training uniform to male and female recruits on night of arrival. It also issues additional uniforms at Training Day 16 to male and female recruits.

The section is staffed with 16 Marines divided into a day crew and a night crew.

4.2.3 Phase 2 Female Issue Point

This section fits and issues the dress uniform to female recruits during the fourth week of recruit training.

The section is staffed with 10 Marines and one civilian employee.

4.2.4 Phase 2 Male Issue Point

This section fits and issues the dress uniform to male recruits during the fourth week of recruit training.

The section is staffed with 13 Marines and 4 civilian employees, one of which is an intermittent employee who is used as needed.

4.2.5   Cash Sales Store

This section sells new and reclaimed uniform items to active duty Marines, recruits, and other authorized patrons.

The section is staffed with 4 Marines.

4.2.6   Storage and Redistribution Section

This section receives and processes inbound shipments, places shipments into storage in the bulk inventory warehouse, and replenishes the issue points as necessary.

This section is staffed with 2 Marines and 8 civilian employees. The Marines are actually part of the Bulk Fuel section of Supply and Service Division but are used mainly to assist in warehouse operations. One of the civilian employees is assigned to collect, account for, and store the personal effects of the recruits.

4.2.7 Organizational Chart

The following chart shows the relationship of the different staffing units responsible for clothing and uniform supply chain management activities at MCRD-PI.
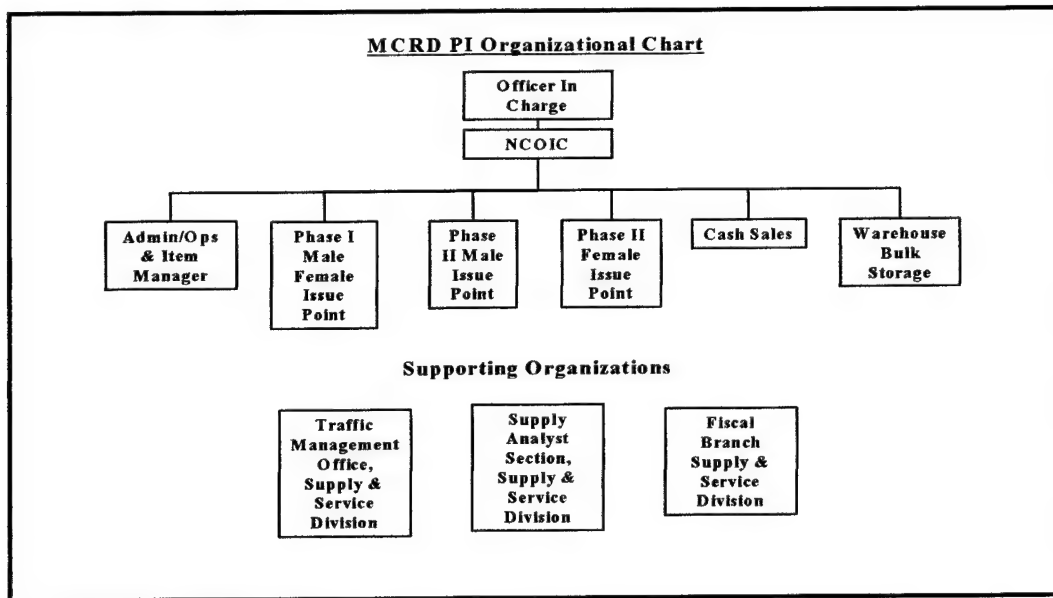
Figure 1 – MCRD-PI Organizational Chart

4.2.8 Supporting Organizations

4.2.8.1 Fiscal Branch, Supply and Service Division

This branch provides financial accounting support for all Navy Working Capital Stock Fund transactions and interfaces with the Defense Financial Accounting Office. This section is staffed with one civilian employee and three Marines.

4.2.8.2 Supply Analyst Section

This section provides support maintaining for the information systems used by the Clothing Branch. These systems include the Marine Corps Uniform Material Management System (MUMMS), BIFRS-Retail, BIFRS-Lite, and the various software suites and routines that operate the storage carousels and track the internal movement of assets. This section is staffed with three civilians.

4.2.8.3 Traffic Management Office (TMO)

First point of destination for all freight arriving at MCRD-PI. Freight is unloaded and temporarily stored in the TMO warehouse. Local units pick up their shipments from the TMO.

4.3 Recruit Issues

MCRD-PI maintains four points of distribution to support recruit training: Bulk Storage, Phase 1 Issue Point, Female Dress Uniform Issue Point, and Male Dress Uniform Issue Point. Each of these locations and their operational activities are described in the following sections.

4.3.1 Phase I Issue

The central issue point for male and female Phase I and subsequent issues is a building specifically designed for that purpose, built within the last ten years. The facility provides substantial bulk storage and breakout space for the efficient processing of recruits. The building also provides office space for the clothing management staff, and a substantial tailoring and seamstress processing area – provided through an outside contractor. There is also a small cash sales store located on the ground floor of the facility.

Recruits receive six green t-shirts, one pair of green physical training (PT) trunks, one pair of sweatpants, one sweatshirt, three white t-shirts, six pair of boot socks, six pairs of liner/dress socks, two pairs of boots (infantry combat and hot weather), two camouflage covers, and three sets of camouflage utility uniforms (tops and bottoms). Male recruits also receive six pairs of jockey shorts.

The initial issue is carried out in the early morning hours and is completed at a rate of approximately one platoon per one and one-half hours. The Phase I recruits receive a sea bag which has been partially filled by a troop detail during the afternoon. The detail pulls items such as underwear, sweats, socks, etc. and pre-fills the sea bag. The items are sized as larges only, given that the majority of the recruits require large size on such items. If it is discovered that an alternate size is required, exchanges are made during the shakedown process. By the time the shakedown is complete, the recruit's sizing and corresponding paperwork is in sync.

Boot sizing is done by trial and error, with the initial size issued being the recruit's stated shoe size. Returns and reissues were numerous, however the entire boot issue process for the observed eighty recruits only took approximately fifteen minutes.

Three platoons were scheduled to be processed over a four hour period, and the issue facility staff pressured the recruits to quickly don their gear, make necessary changes to the issue as needed, and record any issue modifications on the form provided.

4.3.2 Female Phase I Issue

Female Phase I processed in similar fashion, separately from the male issue. The size and processing time of the female platoon was not observed.

4.3.3 Training Day 16 Male/Female Issue

A separate issue of two camouflage utilities sets and dress shoes is provided on training day sixteen. The logic being that the recruits have received a significant portion of their most utility-destructive training by this point in time, and this provides two fresh sets for longer-term use in newer condition.

4.3.4 Phase II Male Issue

Phase II issues are completed at approximately day twenty-two of training. The recruits are initially sized by a group of three fitters who indicate the appropriate size of each component of the issue. The recruits then take a plastic tote box to the issue area and walk in serpentine fashion to each issue location. When the issue is complete, the recruit goes to the shakedown area, dons the issue, and goes back to see the fitter. If the fitter passes the issue, the recruit sees a tailor for final fit. If not, the recruit goes back to the issue area and receives a replacement item for the mis-sized item. Once all exchanges are completed, the recruit sees the tailor. After the final fit alterations are recorded, the recruit removes the issue, places the issue in a laundry bin for delivery to the tailoring contractor, and leaves the facility.

4.3.5 Female Phase II

Female Phase II issues are handled at approximately the same time in the training schedule. Females are directed to open containers of issue items and asked to try samples on to find a size that fits most closely. Once each item is selected, the recruit is reviewed by a fitter/tailor for final fit or exchanges. It has been proven that this method most efficiently fits the female recruit due to the wide variance in female measurements. When final fit is complete, the recruit removes the issue, places the issue in a laundry bin for delivery to the tailoring contractor, and leaves the facility.

4.3.6 Recruit Issue Time Constraints

Recruit issues are scheduled on the Recruit Training Schedule and time schedules must be adhered to. Exceeding scheduled time frames impacts other events on the Training schedule.

The Phase I Issue is scheduled for 1-½ hours on the night of arrival. This issue is done as much as possible by platoon with man counts up to 90+ during the summer surge. Female platoons are much smaller.

The T-16 Issues, which includes the entire male or female recruit company, is scheduled to occur between 1230 and 1630, and is combined with a Recruit PX call.

The Phase II Male Issue done over the course of two days. A male recruit company is divided into two series, of three platoons each. The lead series is scheduled for the first day of the issue and the follow series is scheduled for the following day. The first two platoons of the series are scheduled from 0700 to 1100 and the remaining platoon(s) is scheduled fofrom1300 to 1630. During this time, measuring, issuing, fitting, and first tailoring occurs.

The Phase II Female Issue is an all day affair. Due to the small size of the female training companies, the entire company is processed.

4.4   Non-Recruit Issues

MCRD-PI provides limited uniform support to non-recruits. This support is in the form of periodic bulk sales of chevrons are made to the Recruit Training Regiment, supplemental issues made to active duty Marines, and the operation of the Cash Sales Store.

4.4.1   Bulk Sales

Periodically, Clothing sells bulk chevrons to the Recruit Training Regiment, to be used for gratuitous issue to recruits, of chevrons. These items are requested by the Recruit Training Regiment on a MILSTRIP document citing local funding authority.

4.4.2   Supplemental Issues

Supplemental issues are clothing issues made to active duty Marines for special requirements, or under unique conditions. For example, a Marine assigned to special duty might be provided a supplemental issue of additional uniform items necessary to perform that duty; e.g. Recruiter's dress blue uniform issue, Incentive dress blue uniform issue, uniform issue to Navy personnel serving with Marine Corps units, etc.

MCRD-PI processes these supplemental issues from their Cash Sales Store stocks.

4.4.3   Cash Sales Store

MCRD-PI operates a Cash Sales Store to provide retail sales of uniform items, both new and used, to authorized patrons. Typical sales include additional camouflage uniforms to recruits and recovered clothing (reduced cost) sales to active duty Marines.

Sales are processed through a cash register system that records only total daily dollar sales by Officer and Enlisted sales.

The Cash Sales Store operations and inventory are not part of this STP, except for the capturing of the new clothing issues from bulk inventory to the Cash Sales Store.

4.5   Warehouse Facilities/Replenishment

MCRD-PI uses a combination of bulk storage locations, issue points, information systems, and manual procedures to received, store, move, and issue uniforms to male and female recruits. **(Note - Appendix B contains flowcharts that graphically outline the current replenishment flow of inventory and inventory data within the clothing operation.)**

4.5.1   TMO Facility

The bulk warehouse receives its replenishment from the Traffic Management Office (TMO) facility as deliveries are received on a weekly basis, typically from the Virginia Lion Vallen facility. The TMO is utilized as a central receiving and holding area. Trucks are unloaded, and the freight held for pickup by any of the multitude of recipients.

4.5.2   Bulk Warehouse – Location 10

The bulk warehouse has a truck that travels to the TMO, reloads the Lion Vallen shipment, and delivers the shipment to the bulk warehouse. In similar fashion, the bulk warehouse staff unloads the truck and prepares the stock for storage.

As is done at each of the Phase lines, each receipt is entered into a database, and then stored either on pallet racking or within a carrousel system. Each case of goods that is stored on the carrousels requires recognition of the storage location to be utilized, and confirmation that the storage location was actually available for use. Through this process, the carrousel lines are slowly refilled.

When requests are received for replenishment of the Phase lines, each case of goods is retrieved one at a time from the carrousel line and placed on an open cart destined for the Phase line. The carts are pulled by a vehicle and cart line not much different from the luggage tugs and carriers at airports, except that the carts are not covered – thus inclement weather forces abandonment of the effort until the weather has passed.

4.5.3 Phase Line Replenishment

Prior to receiving the recruits, the issue area was stocked with replenishment inventory from bulk stores. The issue areas have a mix of electronic carrousels, gravity shelving, and static pallet racking. Multiple days' inventory is held available for use, however replenishment occurs as needed on a daily basis. The Phase I issue area has electronic carrousels adjacent to the issue line and static shelving for its boot inventory. The Phase II area has static, gravity, and carrousel shelving.

As stock from bulk stores arrives, warehouse staff keys each case of goods into a software system that recognizes the NSN and date received, and a unique bar-coded identifying label – or 'license plate' – is printed and affixed to the case of goods. The items are then entered into the carrousel inventory system software, the carrousel shelf is filled with one of the cases of goods, the carrousel inventory system software confirms that the item has been placed on the shelf, and the carrousel rotates to the next available open location upon which to place a case of goods.

When it is time to fill the gravity shelving or open table space on the issue line, a request for replenishment stock is given to the carrousel operators by the issue line staff. The carrousel operator enters the request, item by item, into the carrousel inventory software. The carrousel then rotates the shelving to bring the requested item to the operator's workstation. The operator removes the case of goods from the carrousel shelf, and confirms the receipt of the item – the removal of the item from the carrousel – into the operating software. The case of goods is then provided to the issue line staff for placement on the gravity shelving or the table at the issue station.

4.5.4 Automated Storage Equipment

The bulk storage location, Male/Female Phase I location, and the Male Phase II location each have White electronic storage carrousels operated by Magic proprietary operating software which provide a significant portion of their closed-case storage capacity. The carrousels were installed when the self-service store facility was converted to a new location under contract management, and the original facility was closed, obviating the need for the carrousels. Since the carrousels were still functional, it was decided to put them to use in the retail clothing outlet.

Over the years, considerable effort has gone into creating supplementary inventory control components that aid the effort to account for the stock stored within. Meaningful labor is devoted to the task of providing auditable tracking data, allowing for accurate storage and dispensing of the inventory, as well as a mechanism for creating a record from which to charge the clothing issue program for the use of the stock issued to the recruits.

4.6 Information Systems

MCRD-PI is currently managing clothing items utilizing an inadequate combination of inventory management and data base systems. Over the years, considerable effort has gone into creating supplementary inventory control components which aid the effort to account for the stock stored within the carousel system and other storage aids. These efforts, however meaningful in addressing specific system shortcomings, are independent in design and incapable of direct interconnectivity. As a result, considerable labor effort is directed toward accessing and maintaining the data.

During this site visit, interviews with key personnel at MCRD-PI were conducted in order to gain an in-depth understanding of how the current inventory management of clothing items was accomplished.

4.6.1 MUMMS

MUMMS is the Marine Corps Class 1 mainframe computer software system that is used to provide inventory control and replenishment actions for Navy Working Capital Stock Fund inventories.

Due to processing timeframes and the batch style of processing, the information displayed in MUMMS is out of day and not conducive to operating in a fast-paced, low-inventory levels environment. Further, MUMMS does not provide DSCP asset visibility of stocks at MCRD-PI.

4.6.2 BIFRS-Retail

BIFRS-Retail, developed by the Clemson Apparel Research (CAR), contains a decision support system capability where historical data and other user-determined parameters are used to compute replenishment requirements.

4.6.3 BIFRS-Lite

BIFRS-Retail contains data retrieval and manipulation capability to produce management information screens for inventory managers, called BIFRS-Lite. Data displayed is due-in order status, tariff and usage data, current on hand in bulk inventory, and recent transfers of inventory to issue points. Inventory and document status data is imported from MUMMS and the AAVSDatamart are into BIFRS-R to produce the BIFRS-Lite screens and to calculate the recommended buy lists.

4.6.4 Dove Track Automated Carousel System

A stock location program for picking or stocking items stored in carousels. It is a PC based single workstation system/multiple carousel control program that can control a number of vertical and/or horizontal carousels.

4.6.5 Inventory Data Collection System (IDCS)

This is CAR developed software that converts output from the Dove Track Automated Carousel System and converts it to A5A transfer transactions to update MUMMS with the movement of inventory out of the bulk warehouse to the issue points.

Incorporated in the IDCS is the capability to generate a "license plate." The license plate is a sticker that contains NSN, case quantity, and a unique license plate number to track the internal movement of inventory, by case lot quantity.

4.6.6 Automated Issue Point Reporting System (AIRS)

This is a locally developed program that Issue Points use to request replenishment stock from the bulk inventory warehouse.

4.6.7 Unit Diary Marine Integrated Personnel System (UDMIPS)

The Unit Diary Marine Integrated Personnel System is a Marine Corps Class 1 database system that contains personal information on all Marines and recruits. Currently, this system does not contain recruit personal information until after arrival at recruit training. However, after October 1, 2001 recruit information will be available prior to arrival at recruit training.

As a Class 1 system, the reliability and long-term viability exceeds those of the newly introduced Recruit Smart Card system. Conversations with various Marine Corps IT personnel indicate that support for the smart card system may be waning.

4.6.8 Linkages to ARN-Developed Systems

There will be no linkages between any MCRD-PI system and ARN-developed systems. With the conversion of inventory ownership to DSCP, MUMMS will no longer be used to perform inventory management functions. Receipts and adjustments will be performed by the QLM/Local system. Replenishment actions will be initiated by VIM-QLM/Central, and recruit issues reported by the AutoData Scan Forms.

4.7 Operational Data

Highlights of operational data for the previous 12 months from August 2000 to July 2001 are listed below.

> A0A Requisitions: 10,293

> D6 Receipts: 9,418

> Number of NSNs managed: 1,649
> (This *excludes* vendor-managed dress shoes)

> Yearly Stock Fund Budget: $21,784,917

4.7.1 Yearly Sales by Issue Point:

The following table and graphs presents the issues by each of the key operational areas supporting Recruit Clothing issues at MCRD-PI. These areas include:

> **IP 11** – Male/Female Phase I Training Uniform
> **IP 12** – Male Phase II Dress Uniform
> **IP 13** – Female Phase II Dress Uniform
> **IP 18** – Cash Sales

Month/Year	IP 11	IP 12	IP 13	IP 18	Total
Aug-00	$1,181,057	$1,072,976	$223,589	$220,092	**$2,697,714**
Sep-00	$1,111,019	$1,122,880	$77,329	$220,092	**$2,531,320**
Oct-00	$694,616	$501,964	$94,432	$325,095	**$1,616,107**
Nov-00	$1,175,707	$1,463,107	$242,676	$297,883	**$3,179,373**
Dec-00	$545,968	$360,925	$75,628	$76,821	**$1,059,342**
Jan-01	$1,131,023	$680,358	$114,600	$248,672	**$2,174,653**
Feb-01	$796,710	$612,082	$130,282	$71,549	**$1,610,623**
Mar-01	$626,895	$467,196	$67,276	$106,215	**$1,267,582**
Apr-01	$452,512	$146,940	$41,245	$68,388	**$709,085**
May-01	$775,937	$479,691	$148,396	$119,154	**$1,523,178**
Jun-01	$1,266,319	$401,840	$70,370	$76,514	**$1,815,043**
Jul-01	$1,496,580	$1,271,043	$218,360	$81,118	**$3,067,101**
Total	**$11,254,343**	**$8,581,002**	**$1,504,183**	**$1,911,593**	**$23,251,121**

Table 1 – MCRD-PI Yearly Sales by Issue Point

This information is displayed graphically below.

Graph 1 – MCRD-PI Uniform Issues by Area

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The charts below show the total uniform issues at MCRD-PI on a month-by-month basis for the last 12 months for the total supply chain as well as for the different issue areas as indicated.

MCRD-PI Uniform Supply Chain Total Issues
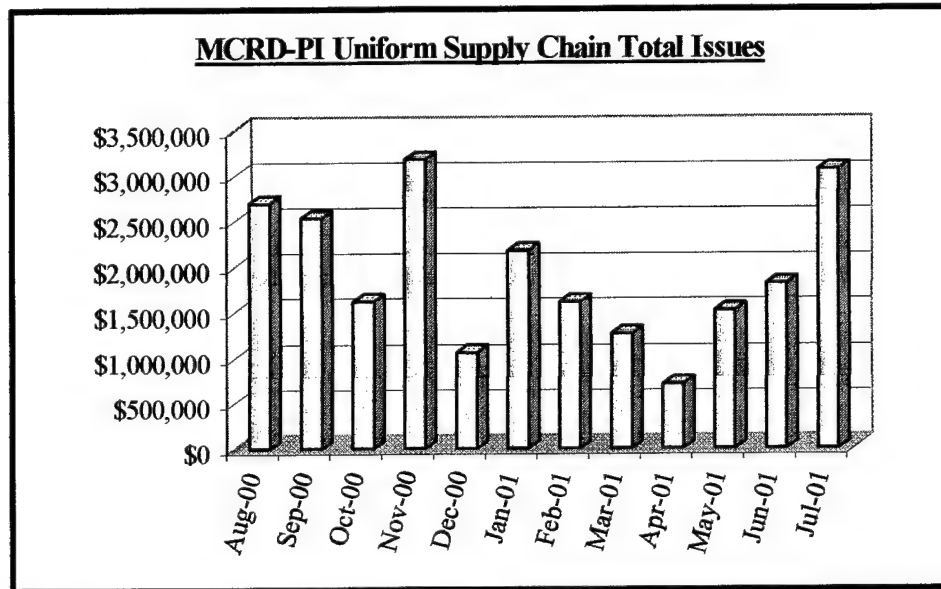
Graph 2 – MCRD-PI Uniform Issues by Month – August 2000 to July 2001

IP 11 – Phase I Male & Female Training Uniform Issues
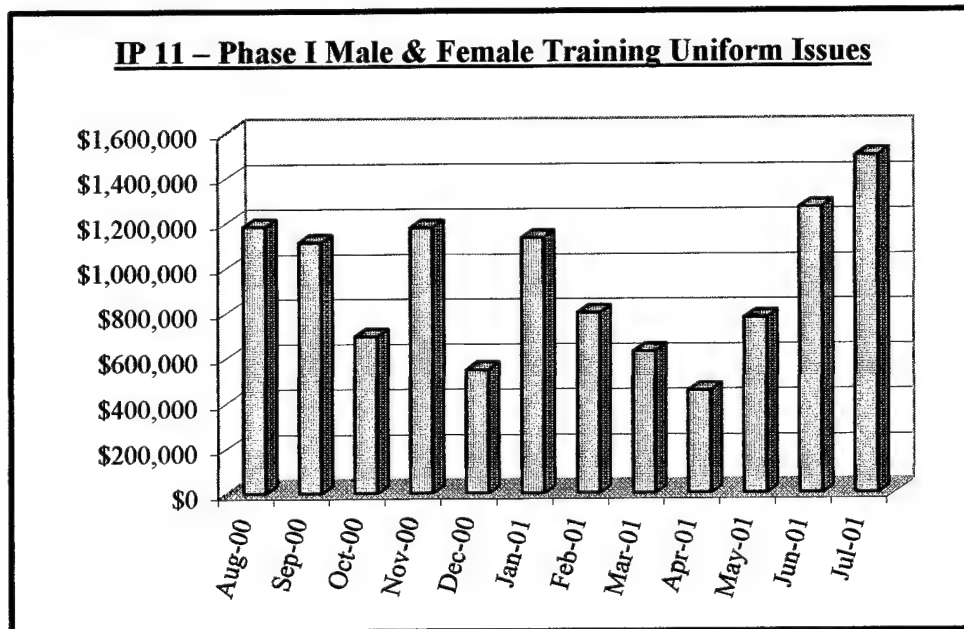
Graph 3 – Phase I Male & Female Training Uniform Issues – August 2000 to July 2001

ADVANTECH
Technology for Competitive Performance
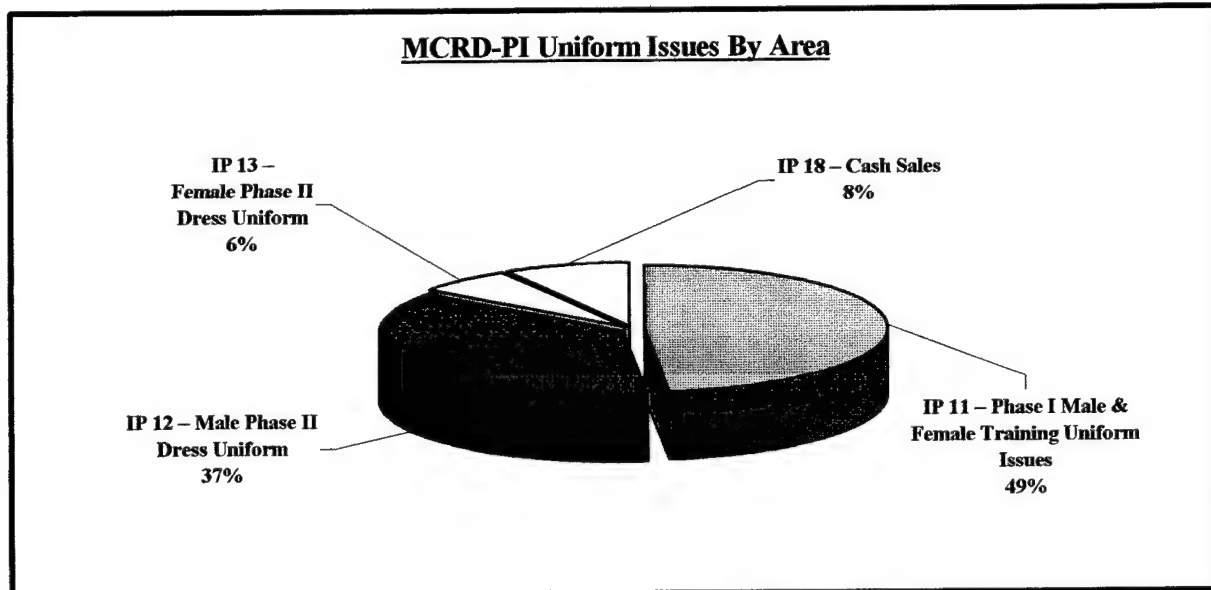
Marines Corps Recruit Depot
Parris Island, SC

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IP 12 – Male Phase II Dress Uniform Issues
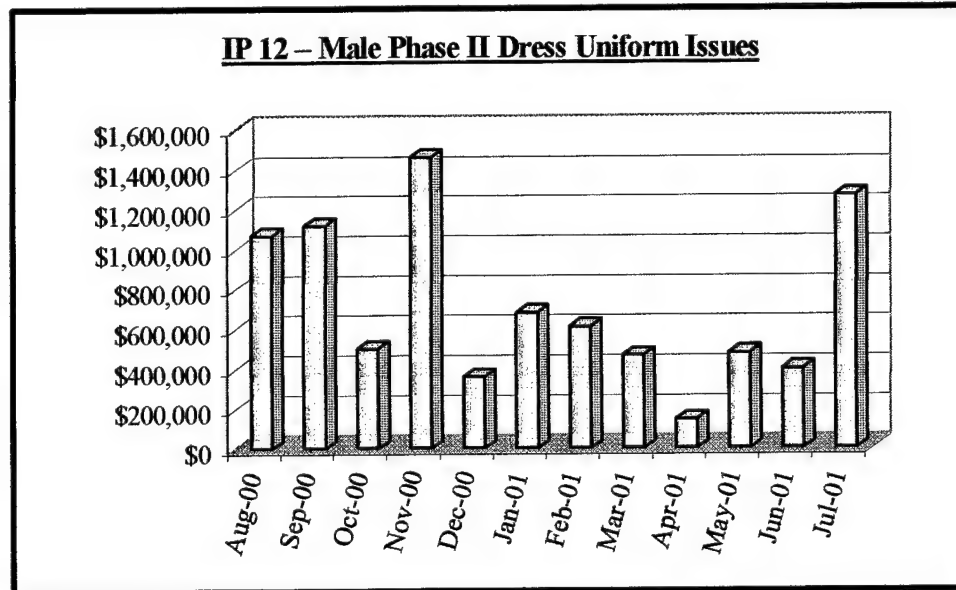
Graph 4 – Phase II Male Dress Uniform Issues – August 2000 to July 2001

IP 13 – Female Phase II Dress Uniform Issues
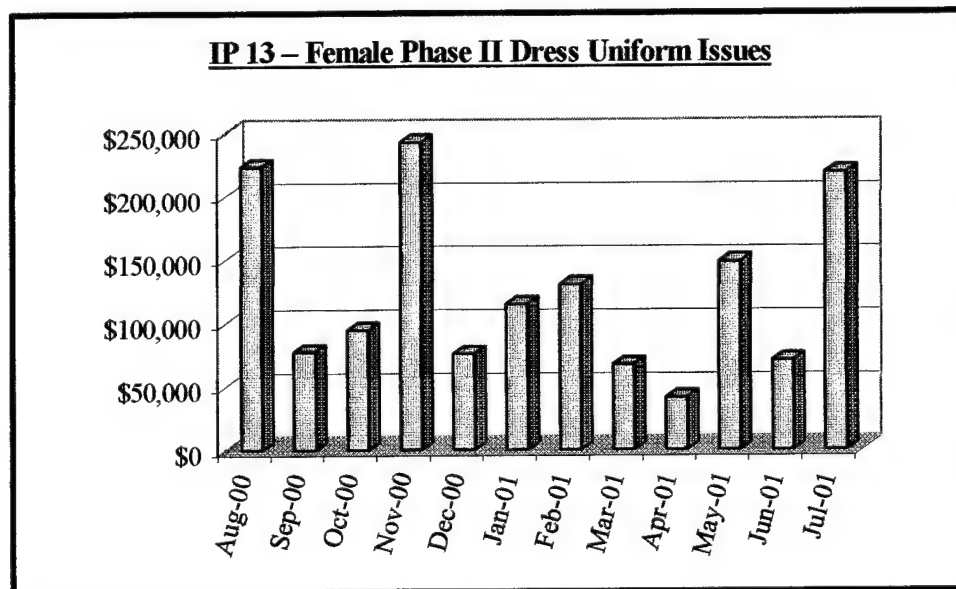
Graph 5 – Phase II Female Dress Issues – August 2000 to July 2001
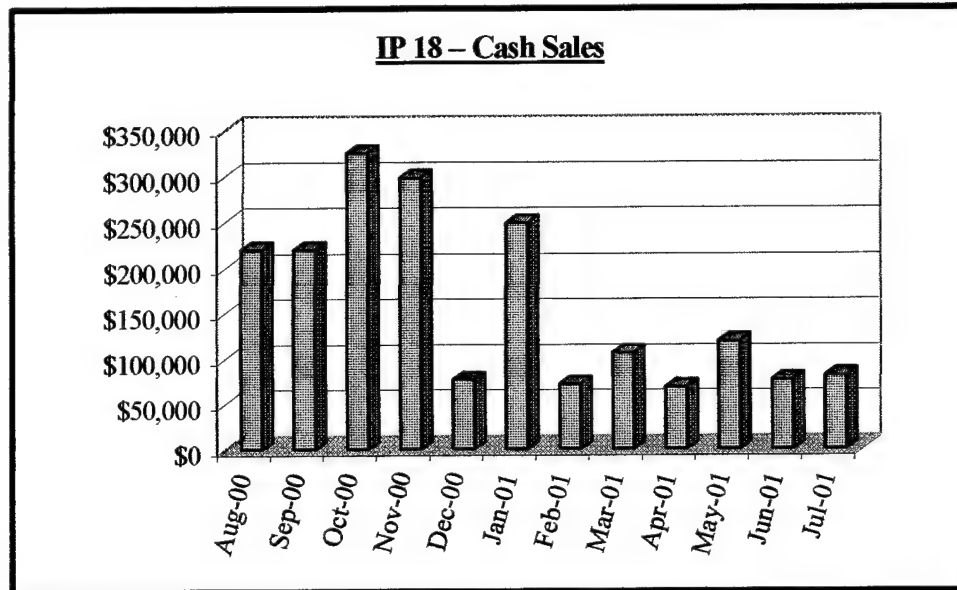
IP 18 – Cash Sales

Graph 6 – MCRD-PI Cash Sales Issues – August 2000 to July 2001

4.7.2   Monthly Value of MCRD-PI Uniform Inventory

Month/Year	$ Value
Jun-00	$6.1M
Jul-00	$5.7M
Aug-00	$5.3M
Sep-00	$3.8M
Oct-00	$4.6M
Nov-00	$3.35M
Dec-00	$3.45M
Jan-01	$3.35M
Feb-01	$2.1M
Mar-01	$1.7M
Apr-01	$2.15M
May-01	$2.9M

Table 2 – MCRD-PI Monthly Value of Uniform Inventory – June 2000 to May 2001

This information is displayed below graphically. As shown, the reviewer can see that personnel at MCRD-PI were actively reducing retail inventory levels in preparation for conversion to transferring assets to DSCP for establishing "Wholesale Local Inventory Operations."
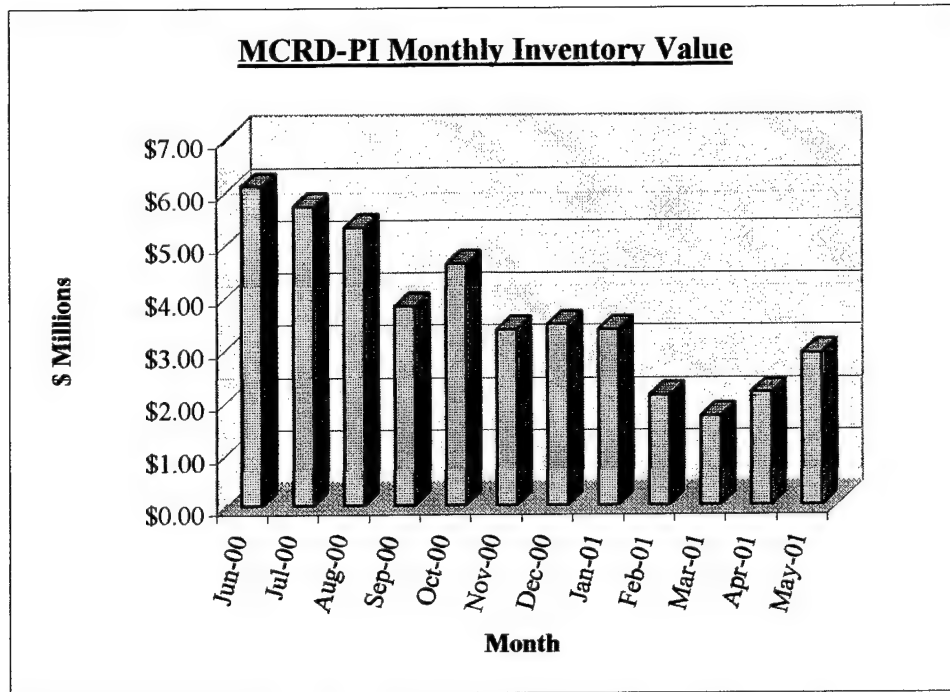
Graph 7 – MCRD-PI Monthly Inventory Value – August 2000 to July 2001

5.0 WHOLESALE LOCAL INVENTORY OPERATIONS

This section provides discussion of operations as they are planned after the conversion of the existing inventory operations to "Wholesale Local Inventory" operations with transfer of uniform clothing assets from MCRD-PI to DSCP ownership.

5.1 Inventory Control and Replenishment

After transition, the inventory at MCRD-PI will be under the ownership of DSCP. The overall management of the inventory will rest with DSCP; however, MCRD-PI will act as the local agent of DSCP. In that regard, MCRD-PI will be responsible for safeguarding and accounting for inventory receipts, care-in-storage, expediting shipments, and reporting of all issues. MCRD-PI will also be responsible for reporting shipment shortages/overages and quality problems.

5.1.2 QLM/Local

A QLM/Local workstation will be installed in the Administration and Operations Section of the Clothing Branch. The QLM/Local inventory balances will be the official inventory balances.

MCRD-PI will enter all receipts and inventory adjustments into QLM/Local. The Recruit Exchange will be used to perform one-for-one exchanges of condition code A like items. The Credit Return function will be used to bring condition code A items back into the wholesale local inventory.

MCRD-PI will establish procedures to conduct spot inventories when inventory imbalances are suspected. The establishment of a cycle count program in encouraged.

5.1.3 Semi-Annual Inventories

It is recommended that MCRD-PI conduct a semi-annual inventory with direction and support from DSCP. Results of the inventory will be reported to DSCP and Marine Corps Headquarters and MCRD-PI.

5.2 Recruit Issues

Recruit issues will be captured using optical scanning forms developed by AdvanTech, Inc. in conjunction with MCRD-PI.

5.2.1 Current Procedures Used at MCRD-PI

In the past, Parris Island has developed various forms to capture uniform issue size and quantity data. They use these forms at the Phase 1 Issue, the T-16 Issue and the male and female Phase 2 Issue. Recruits fill out name, SSN, platoon number, issue date, and designate either Regular or Reserve status.

At the Phase 1 Issue, recruits initial each uniform item received. Only boot sizing data is annotated on the form. A Clothing employee does the size annotation. The boot size data is used to verify the size issued when a recruit returns to Clothing requesting an exchange of boots due being issued the wrong size boots. . .

At the Phase 2 Male issue, a Fitter measures the recruit to determine the size to be issued. The Fitter communicates the size to a recruit platoon representative who in turns annotates the size in the appropriate space on the form. The form is then used as a pick ticket as the recruit goes through the issue line. After the issue process, the recruit initials each uniform item received. Any subsequent size exchanges are marked on the form.

The recruit and sizing data information on the forms is not used to report issues, nor assist in calculating replenishment data. Under the MUMMS/Navy Stock Fund system, replenishments are calculated based on reorder parameters established for the bulk inventory issue point only and are based on movements of case quantity movements of inventory from the bulk warehouse to the individual issues points.

Issues are reported weekly with a single dollar value transaction, categorized by Active and Reserve component recruit.

5.2.2 Using Optical Imaging Forms

Optical imaging forms (scan forms), similar to those used at MCRD San Diego, will be used to capture daily issues to recruits. New forms will be developed, or San Diego forms modified, to be used at the Phase 1, T-16, and Phase 2 issues.

Where possible, the forms will be designed to minimize the amount of marking necessary. Recruit identification information, such as name, SSN, Platoon Number and Regular or Reserve component will be imported/merged from a local recruit information database, either the recruit Smart Card system or the UDMIPS System eliminating the need for the scanner software to read myriad hand printing styles.

Where needed, and if possible, forms will be designed to allow a non-scannable area as a left column where initial sizing data can be annotated. This will allow the form to be used as a pick ticket and an issue document.

Initial training on filling out the forms will be conducted; however, Parris Island will ultimately determine the quickest, most effective procedure.

After each issue event, the forms will be collected and passed to the administrative office where they will be processed through the scanner. The scanner and associated software will read and collect the issue data, consolidate NSN and quantity data by Regular or Reserve component and format the data into a J0A issue MILSTRIP transaction file which will be transmitted via ftp to the QLM/Central ftp site.

The Regular or Reserve designation will determine the Fund Code that will be entered in the J0A, so that the correct Marine Corps appropriation can be charged. Nightly, the QLM/Local workstation downloads the reformatted issue transactions and updates the inventory on hand quantities.

Returns, exchanges, inventory adjustments, and receipts keyed into QLM/Local will be uploaded to ASTRA and forwarded to SAMMS after validation checks are complete. The J0A issue transaction will then be transmitted to the ASCOT ftp site for entry into SAMMS. DSCP will use the J0A issue data to prepare and support the monthly billing document transmitted to the Marine Corps for payment.

5.2.3 Forms Requirements

A total of ten forms were developed for MCRD San Diego. Five are used to capture recruit bag items issues. Other forms are used for incentive dress blue uniform issues and for issues to Recruiter's School students. Some San Diego recruit issue forms may, with slight modification, may be usable at Parris Island. New forms for the female uniform items will have to be developed.

FORMS COMPARISON BETWEEN MCRD-PI AND MCRD-SD				
MCRD-PI ISSUE	**APPLICABILITY**	**MCRD-SD ISSUE**	**MCRD-SD FORM**	**PURPOSE**
Phase 1 Male and Female (Night of Arrival)	Two new forms needed. In addition to items issued at SD, PI also issues boots, liner	Night Room (Night of Arrival)	001	Issue of PT gear, underwear, boot socks, cammie caps, and one cammie trouser.

	socks, and 3 sets of cammie uniforms. Females are not issued jockey shorts.			
T-16 Male and Female Issue (Training Day 16)	Two new forms needed. Issue of 2 sets of cammies uniform and dress shoes.	None	NA	NA
Phase 2 (Male Dress Uniform)	Usable with modifications to delete dress shoes from form and associated data tables.	2L (Male Dress Uniform)	003, 004, 005	Issue of dress uniform. Due to large number of items 3 pages are required.
Phase 2 (Female Dress Uniform)	New form(s).	None	NA	NA
Incentive Blues	Male form usable. Need new form for female issue.	Honorman Blues Issue	006	Issue of incentive Dress Blue uniform to Honor Graduates.
NA	NA	Miscellaneous Issues	007	Issue of Supplemental Uniform Items
None	NA	Recruiter's School Issue (Male & Female Issue)	008, 009, 010	Issue of Dress Blue uniform to male and female Recruiter's School students.

Table 3 – MCRD-PI and MCRD-SD Forms Comparison

MCRD-PI expressed concern with the amount of time necessary for recruits to fill out the forms. Recruit schedule timeframes for completing uniform issues are much narrower than at MCRD-SD. MCRD-PI has received information from SD that filling out the issues forms is too time-consuming. There were no particular concerns expressed regarding the time necessary to process the forms, after being filled out.

The AutoData Scannable Office software and scanner hardware will be installed on MCRD-PI-owned workstations in the Clothing Administrative office. The AutoData software requires at minimum, the Windows 98 operating system with 32MB RAM (64MB recommended), and free disk space of 30-50MB. The hard drive should be partitioned to create a "D" drive to load and run the AutoData software, which requires a dedicated drive to create and read forms. This is necessary so that forms and tables created at MCRD-SD can be used as much as possible at MCRD-PI.

The two scanner systems will be installed on workstations, which are "inside the firewall" network security system. . The second workstation is for backup purposes, but also provides the capability for two workstations to be scanning forms simultaneously. The programming necessary to convert the scan data into J0A MILSTRIP transactions is capable of combining the data from two workstations and creating one daily issue file for transmission by ftp to QLM/Central.

5.2.4 Forms Development

Forms development is a five-step process. Design, Data Mapping, Programming, Testing, and Training.

5.2.4.1 Design

The format of the form is determined in conjunction with what data will be captured. Form design requires significant input and coordination with MCRD-PI.

5.2.4.2 Data Mapping

The development of data tables and processes to link specific data fields on the form with specific records in the data tables. This ensures that the item selected on the form translates into the correct NSN and quantity for issue reporting requirements.

5.2.4.3 Programming

The process of gathering and combining the output of the data mapping process to generate appropriate and accurate issue transactions.

5.2.4.4 Testing

Processing completed forms to ensure that the data accumulated meets pre-determined results, and making corrections as necessary.

5.2.4.5 Training

Providing hands on training with personnel at MCRD-PI who are tasked with processing forms.

5.3 Non-Recruit Issues

AdvanTech envisions that MUMMS should be eliminated as part of a logical Phase II follow-on to Phase I implementation of ARN systems and solutions to convert inventory to wholesale local operations. With the elimination of MUMMS as the inventory management system, MCRD-PI will no longer have an "inside the firewall" legacy system to report non-recruit issues. Issues to be reported include issues to the Cash Sales Store, bulk sales of rank insignia to the Recruit Training Regiment, and miscellaneous supplemental issues to active duty Marines.

5.4 Data and Material Flow After Conversion
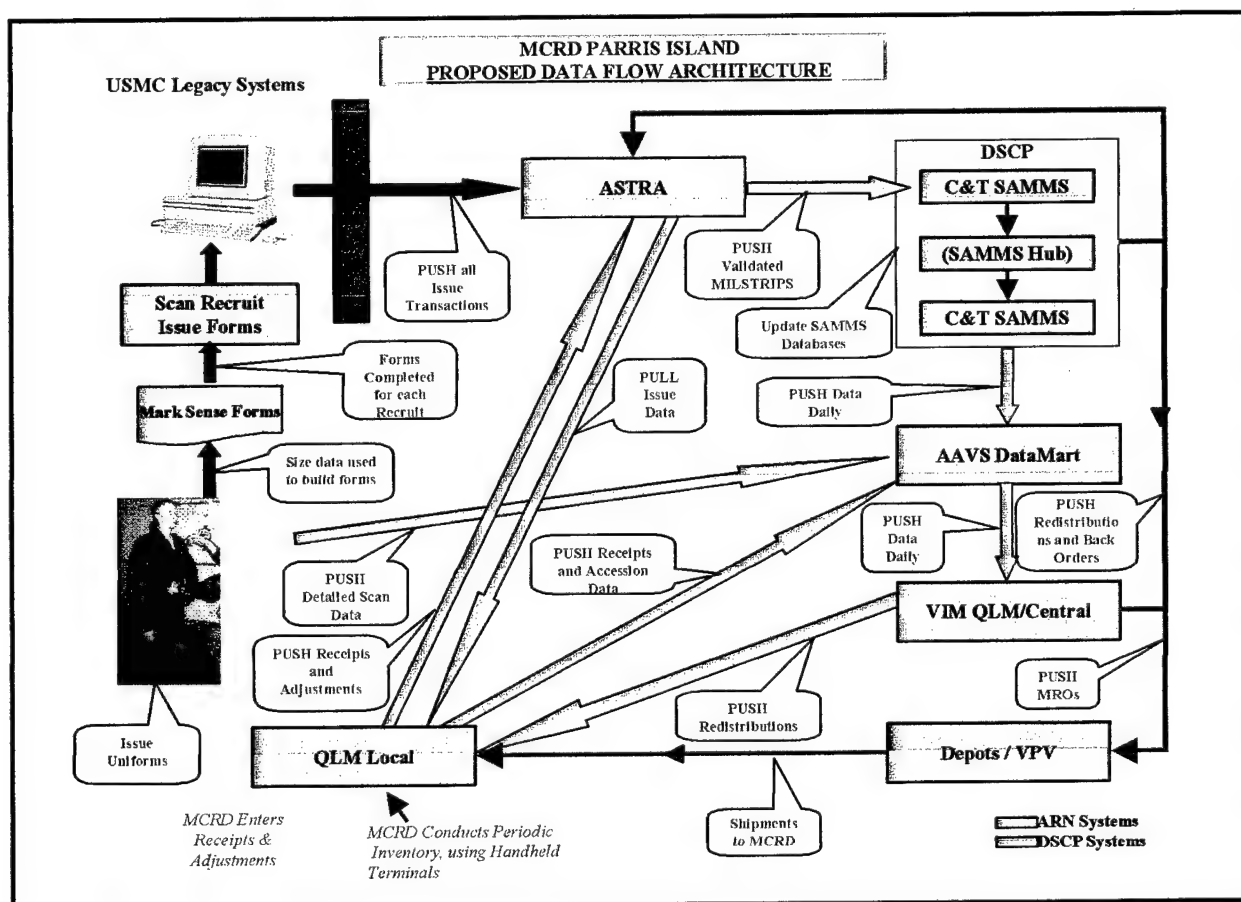
Figure 2 – MCRD-Parris Island Proposed Data Flow Architecture

The chart depicts the flow of data and material at MCRD-PI from the issue of uniform items to recruits to the receipt of replenishment shipments.

The lack of a viable legacy system at MCRD-PI to report issues after the conversion to wholesale local inventory is addressed in paragraph 7.1.2 and an alternative is proposed in paragraph 7.2.2.

6.0 SUMMARY OF ISSUES AND RECOMMENDATIONS

During the course of the visit, several issues were expressed by MCRD-PI key personnel and observed by AdvanTech, Inc. representatives.   The key issues and related recommendations are summarized in this section.

6.1 MCRD-PI

6.1.1 AutoData Scan Form Processing

The greatest concern expressed by MCRD-PI was the perceived amount of time necessary for recruits to fill out the scan forms. Representatives from MCRD-PI recently visited MCRD-SD and observed the use of the scan forms and QLM/Local. Any process that might cause a clothing issue event to exceed Training Schedule time frames will not be viewed favorably by the command.

Recommendations

AdvanTech explained that this had not resulted in any major difficulties at MCRD-SD and additional changes were being made to improve processing at that location.

6.1.2 Impacts on Legacy Systems

As a result of changes to be implemented during Phase I of the proposed implementation activities, the elimination of MUMMS will result in the loss of internal carousel location visibility of assets.

Recommendations

 This change will need to be addressed with new operational procedures developed by MCRD-PI during Phase I. It is likely that this will be addressed further by a follow-on Phase II support to refine systems for local operations. QLM/Local provides for multiple locations per NSN, but only reflects one on hand quantity.

6.1.3 Inventory Management Procedures

The loss of BIFRS-Retail will result in the loss of the BIFRS-Lite screen that managers currently use to view inventory balances/shortages, replenishment document status, and recent internal movements of stock.

The loss of these local systems will also reduce the ability to conduct causative research into inventory variances, since the internal movement of assets information will no longer be visible.

Recommendations

The implementation of the new ARN systems will require new operational procedures to be developed and implemented to meet requirements. These will be identified and addressed with subsequent Phase II support following review of requirements and approval by ARN program management.

6.1.4   Due Member Tracking

The loss of ability to track Due Member requirements.

Recommendations

The implementation of the new ARN systems will require new operational procedures to be developed and implemented to meet requirements. These will be identified and addressed with subsequent Phase II support following review of requirements and approval by ARN program management.

6.2   Implementation Issues

6.2.1   Inventory Management Issues Post Conversion to ARN Systems

Upon conversion to wholesale local inventory, MCRD-PI will no longer have a legacy system to report issues, particularly issues to the Cash Sales Store and non-recruit issues.

At FY 2002, changes to both the male and female bag issue will occur. Depending on the date selected for conversion, two sets of forms may have to be developed. One set to finish out FY 2001, and second set to accommodate FY 2002 changes.

There is a strong probability that the Marine Corps will adopt a new style of camouflage utility uniform during FY 2002. If this occurs, the scan forms for both the male and female Phase I and T-16 issue, and associated data tables will have to be revised.

Recommendations

As previously noted implementation of new systems and procures may require new operational procedures to be developed and implemented. The above issues are similar to those encountered with other sites in dealing with modifications to the military uniform supply chain and are not expected to cause any major difficulties. As noted, it is expected that subsequent Phase II support will focus on additional needs based on specific of requirements with modifications and enhancements approval by ARN program management.

6.2.2 AutoData Scan Workstations

The computer workstations in the Clothing Branch use Windows 95 as an operating system. The Auto Data Scannable Office software requires, at a minimum Windows 98. New workstations with Windows 2000 are being procured, but no decision has been made to locate any of these new workstations in Clothing.

Recommendations

AdvanTech recommends that the necessary equipment be provided to meet operational requirements. Two workstations with a minimum of Windows 98 operating system, 32MB (64MB preferable) of RAM, and hard disk space of at least 50MB. Creation of a D:\ drive on the workstation hard drives is also required.

6.3 Other Issues

6.3.1 Reporting of Issues by Case Lot Method

MCRD-PI proposed that issues be reported by case lot method. This method complements the internal systems established to track individual cases of inventory through their carousel storage system and ultimate movement to the final issue counter where the actual issue to the recruits is made.

With this method, daily issues (J0A transactions) would comprise a cumulative case lot quantity by NSN versus actual issues processed. Demand would reflect movements of case lot quantities rather than actual daily usage.

Two unresolved questions pertain to this alternative: 1) Determination of accurate uniform costs to be charged against Marine Corps Manpower appropriations and against Marine Corps Reserve appropriation is difficult with the case lot method; and, 2) Issues by the case lot method create a substantial quantity of inventory on the issue line that has been sold to the Marine Corps and is unaccounted for at a detailed level.

Recommendations

AdvanTech recommends that both of these unresolved questions be discussed with MCRD-PI and Headquarters, Marine Corps personnel so appropriate decisions and guidance can be provided.

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7.0   ACTIONS FOR CONVERSION TO DSCP OWNERSHIP

This section provides a discussion of the steps and activities that must be accomplished in order to transfer assets from MCRD-PI local inventory ownership to DSCP "Wholesale Local Inventory" ownership and operations.

7.1   DSCP Actions

AdvanTech identified the following activities and actions that need to be completed by DDSCP in order to achieve successful implementation and conversion of the retail inventory to wholesale local inventory operations

> ➢ Procure the QLM/Local workstation and associated hardware.

> ➢ Procure the form scanner hardware and software to establish two workstations.

> ➢ Establish the conversion "go-live" date.

7.2   MCRD-PI Actions

AdvanTech identified the following activities and actions that need to be completed by MCRD-PI in order to achieve successful implementation and conversion of the retail inventory to wholesale local inventory operations:

> ➢ Provide an accurate list, by PGC and quantity issued, for each type of issue that scan forms need to be developed for.

> ➢ Provide 12-month demand history by NSN.

> ➢ MCRD-PI to develop non-recruit issue processing procedures to ensure accurate issues data is provided for replenishment of QLM/Local inventories to meet recruit demands.

> ➢ Work with AdvanTech, Inc. to establish reorder parameters for each NSN to be stocked. Identify those NSNs where the reorder objective equals zero.

> ➢ Prior to conversion, submit to Lion Vallen the inventory and reorder levels for each NSN supported.

➢ Eliminate any obsolete stocks and identify the NSNs so that the data does not get transferred to the QLM/Local files.

➢ Coordinate with the Recruit Administrative Center to gain access to the UDMIPS database so that recruit personal data is available to be automatically entered on the scan forms.

➢ Ensure that two workstations in the Operations Section meet the following minimum requirements: Windows 98 operating system; 32MB (64MB preferable) of RAM; and hard disk space of at least 50MB.

➢ Create a D:\ drive on these workstations for loading and operating the AutoData software.

➢ Provide a dedicated telephone line for QLM/Local to transmit and receive inventory and other data.

➢ Establish an "inside the firewall" method for processing issues to Cash Sales and for non-recruit requirements.

➢ Coordinate with DSCP, and conduct a complete physical inventory just prior to conversion of the inventory to DSCP ownership.

7.3 Implementation Activities & Actions

AdvanTech identified the following activities as essential steps that must be completed to achieve success:

➢ Develop, in conjunction with MCRD-PI, scan forms for all required issues, ensuring that the FY 2002 bag issue PGCs and quantities are reflected. Address the automatic incorporation of recruit name, SSN, and Platoon Number.

➢ Request a wholesale local DODAAC from DSCP for use by MCRD-PI..

➢ Request an ASCOT login and password from DSCP to transmit issues, receipts and inventory adjustments to SAMMS.

➢ Establish an Internet service provider account to provide QLM/Local the ability to transmit and receive inventory data.

➢ Install and test all QLM/Local and AutoData software.

7.4   Proposed Timeline

7.4.1   Timeline Chart

The following Table presents the proposed timeline for QLM/Local installation, training, inventory conversion and post go-live support at MCRD-PI.

Initial Support Pre – Go-Live Sept. 10, 2001	Inst. Support Pre – Go-Live 4 Weeks	Inst. Support Pre – Go-Live 2 Weeks	Support Go-Live Week Nov 5, 2001	Post Go-Live Support +1 to +4 Weeks	Post Go-Live Support +4 Weeks
- Acquire all equipment & software. - Collect initial inventory data. - Begin developing scan forms.	- Install scanner hardware & software "behind firewall" at PI. - Begin training on processing scan forms. - Hot stage QLM/Local workstation at AdvanTech.	- Forms development complete. - PI start using forms to develop procedures at issue points. - Install QLM/Local workstation at PI. - Test QLM/Local processes. - Begin training MCRD-PI staff on QLM/Local processes.	- Conduct Go Live inventory - Go-Live. - Began transmitting "live" inventory and issue data.	- Monitor form scanning processes and data transmissions. - Monitor QLM/Local processes and data transmissions.	- Conduct Post-Implementation follow-up visits and training.

Table 4 – Proposed Timeline for MCRD-PI Implementation

7.4.1 Timeline Rationale

Based on lessons learned at MCRD-SD, it is imperative to start the scan forms development and training early in the process. Development, in close coordination with MCRD-PI will occur. Mapping, creation of data tables, programming must be accomplished. Programming must be accomplished to import into the scan forms, personal recruit data, from the UDMIPS database. After scan form formats have been solidified, data tables and programming routines must be created and tested to ensure that the correct NSN and quantity data is being collected and formatted properly.

AdvanTech identified a minimum of seven new forms that must to be created for MCRD-PI. Development should commence at least eight weeks prior to the transition to wholesale inventory (go-live). Forms development, data mapping, programming, and testing must be completed two weeks prior to go-live. During the two weeks prior to go-live, MCRD-PI will be training on processing the forms and developing procedures for completing the forms during actual recruit issues.

The projected timeline is targeting November 5, 2002 as the go-live date. This is due to the amount of effort required to develop and implement the scan form process, and because of changes to both the male and female recruit bag issue items for FY 2002. Forms development, at go-live minus eight weeks is targeted to begin September 10, 2001.

Prior to the conversion, a determination must be made that completion of the scan forms can be accomplished within the scheduled timeframes allotted for the clothing issues and fitting. If not, a pre-approved alternate plan must be available for immediate implementation.

In summary, AdvanTech recommends the timeline presented with careful review and adjustment in resources provided if necessary during implementation to ensure successful outcomes and achievement of project objectives.

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APPENDICES

Appendix A – Definition of Terms & Acronyms

Definition of Terms & Acronyms

The following terms and acronyms are used in this report and are listed to provide clarity of understanding for the reader.

AAVS DataMart – ARN Asset Visibility System DataMart. The single repository of all clothing and textile data used by ARN developed recruit clothing supply chain systems.

AIRS – Automated Issue Point Reporting System. A locally developed program the Issue Point workers use to request replenishment stock from the bulk inventory warehouse.

ARN -- Apparel Research Network made up of selected industry and academic partners working together to develop innovative solutions for the Apparel industries support of military departments.

ASCOT -- Automated System for Cataloging and Ordering Textiles

ASTRA – ARN Supply-chain Transaction Repository Audit system. A system that receives MILSTRIP and non-MILSTRIP issue, inventory adjustment, and receipt data; validates non-MILSTRIP data; pushes data to SAMMS; and, provides an audit capability to ensure that transmitted data was received by SAMMS.

AutoData Scannable Office – Software suited used to develop and process the scan forms used to capture recruit issues by NSN and quantity.

BIFRS-Lite – A Clemson Apparel Research developed system that displays due-in order status, tariff and usage data, current bulk inventory levels, and recent transfers of inventory to issue points on Inventory Managers workstation screens. Produced from BIFRS-Retail data.

BIFRS-Retail – A Clemson Apparel Research developed system that provides data retrieval and manipulation capability from MUMMS and the AAVS DataMart to calculate recommended buy lists.

Cash Sales Store – Store operated by the Clothing Section to provide retail sales of uniform items to active duty Marines and recruits.

DFAS -- Defense Finance Accounting System - This system interfaces with DSCP for financial activities such as receiving verification. This platform tracks authorizations for vendor payments.

DODAAC -- Department of Defense Activity Address Code –Used to identify source or destination of electronic financial information as a "cost center."

DSCP -- Defense Supply Center Philadelphia - DSCP controls the procurement and distribution of Medical, Subsistence (i.e., food), and Clothing and Textiles commodities to Defense Logistics Agency (DLA) depots and stock record accounts, worldwide.

Due Member – A chit/form used to indicate that the Clothing Section owes a recruit a specific uniform item. Issued in lieu of a uniform item when that item is at zero inventory balance. The due member chit/form is later redeemed for the appropriate uniform item.

IDCS – Inventory Data Collection System. A DOS-based program developed by Clemson Apparel Research that converts output from the Dove Track Automated Carousel System into an A5A transfer transaction to update MUMMS.

Dove Track Automated Carousel System - A simple stock location program for picking or stocking items stored in carousels. It is a PC based single workstation sytesm/multiple carousel control program which can control a number of vertical and/or horizontal carousels.

MCRD PI – Marine Corps Recruit Depot, Parris Island.

MCRD SD – Marine Corps Recruit Depot, San Diego.

MILSTRIP – Military Standard Requisitioning and Issue Procedures. These are standardized data formats to ensure concise accurate information capture for proper processing and accounting for inventory replenishment and usage.

MUMMS – Marine Corps Uniform Materials Management System. The current legacy system used by MCRD PI to requisisiton, issue, receive, and stocks. It also interfaces with the Marine Corps finaincail system.

Optical Imaging Forms – See Scan Forms.

Phase I Issue – The issue of uniform items each recruit, male and female, receives on night of arrival at recruit training. The issue consists of a physical training uniform, boots, undergarments, and three sets of the camouflage training uniform.

Phase II Issue – The dress uniform issue that occurs during the fourth week of recruit training. Male and female recruits receive appropriate quantities of their respective dress uniforms.

QLM – Quality Logistics Management^{TM} – Material Management inventory system supporting acquisition, issues and distribution and predictive forecasting.

QLM/Local – The QLM software implemented as a "wholesale local" inventory management system supporting acquisition, distribution and predictive forecasting at Ft. Leonard Wood as a

prototype for future sites. The system provides a "local" capability to manage wholesale inventory assets located at the CIIP including receipt and inventory adjustment processing.

QLM/Retail – The QLM software with enhancements implemented as a retail inventory management system supporting acquisition, issues and distribution and predictive forecasting at Marine Corp Recruit Depot-San Diego with interfaces to ASCOT and the Marine Uniform Materials Management System (MUMMS).

Recruit Training Schedule – A schedule that stipulates, by hour and training day, what training and administrative events the recruits will perform. Time is scheduled to visit the Clothing Section for uniform issues and tailoring appointments.

SAMMS – Standard Accounting and Material Management System - This system is used by the Defense Logistics Agency, Defense Procurement Support Center.

Scan Forms – Pre-printed forms developed with the AutoData Scannable Office software to capture NSN and issue quantity data for all recruit issues. Scan forms are processed with the AutoData Scannable Office software to accumulate and transfer issue information to data tables for further reporting to DSCP.

Smart Card – A credit card size plastic card that stores personal information that can be read in special readers. Linked to a Marine Corps locally maintained data base.

TD-16 Issue – Uniform issue made on Training Day 16 to male and female recruits. The issue consists of two sets of camoflagure training uniforms and dress shoes.

TMO – Traffic Management Office. First point of destination for all freight arriving at MCRD PI.

UDMIPS – Unit Diary Marine Integrated Personnel System. A Marine Corps Class 1 database system that contains personal information on all Marines and recruits.

VIM-QLM/Central – The Virtual Item Manager (VIM) system is comprised of several components or modules. The VIM-QLM/Central software module provides the decision support system capabilities for managing wholesale stocks and supply redistributions to end-use customers based on analysis of forecasted and actual usage and inventory availability.

VIM – The Virtual Item Manager (VIM) system incorporates operational data extracted from the SAMMS Clothing & Textile (C&T) server as the basis for the operational and decision support capabilities provided in a single source of information for Item Managers at the retail (Recruit Training Centers) and wholesale (DSCP) level.

Wholesale Local Inventory – Inventory at MCRD PI, but owned by DSCP, maintained in bulk storage and on the issue lines to support recruit issues.

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Appendix B

MCRD-PI Replenishment & Data Flowcharts

MCRD Parris Island
Replenishment Stock Supply Chain Flow
Bulk Warehouse

Receiving Process

90% - 95% of TMO Business is Recruit Gear

Deliveries Received at TMO Facility Temporary Storage

MSU10 Materiel Handlers

License Plate, NSN, and Quantity Received is Scanned in using Janus 2020 RF HHT's

Parris Island Truck Delivers Phase I Issue

Materiel Checked Against Shipping Mat (DD 1348-1 or DD 250)

Materiel Scanned into IDCS Inventory Data Collection System

IDCS Data

Dovetree Automated Carousel System Software

Item Manager

Supply Systems Services Staff Create License Plate Labels, Deliver to Bulk Warehouse and Phase II

DD 1348-1 or DD 250 to Item Manager

Receipts Input into MUMMS

B6U Receipt

Apply License Plate Created Offsite

Stock Carousel or Static Pallet Racks

DD 1348-1 or DD 250 Document Originals Filed

Phase I, Female Phase II, or Cash Sales Store

Await Requisition to Issue Point

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MCRD Parris Island
Replenishment Stock Supply Chain Flow
Phase II

Receiving Process

Deliveries Received at TMO Facility Temporary Storage

MSU10 Materiel Handlers

License Plate, NSN, and Quantity Received is Scanned in using Janus 2020 RF HHT's

Parris Island Truck Delivers Phase II Issue

Materiel Checked Against Shipping Mat (DD 1348-1 or DD 250)

Materiel Scanned into IDCS Inventory Data Collection System

IDCS Data

Dovetree Automated Carousel System Software

Supply Systems Services Staff Create License Plate Labels, Deliver to Bulk Warehouse and Phase II

Item Manager

Apply License Plate Created Offsite

DD 1348-1 or DD 250 to Item Manager

Receipts Input into MUMMS

DD 1348-1 or DD 250 Document Originals Filed

Stock Gravity Racks or Carousel

Await Requisition to Issue Line

MCRD Parris Island

Supply Chain Flow
Bulk Storage to Phase I or
Female Phase II Issue Point

Await Replenishment Requisition

Automated Inventory Replenishment System (AIRS) Requisition Disk Created by Issue Location

Clears License Plate and Storage Location Out of Carousel

Input Request into Dovetree System

Picking Queue Created

Text File Created to Disk

Pull Stock from Shelving

Dovetree Report Confirming Stock Pull

IDCS Document Created

A5A Created

Input Into MUMMS System

Stored Electronically

Confirm Stock Pull into Dovetree

Place Stock on Delivery Resources

MSU11 Phase 1 Delivery by Tug

MSU13 Female Dress Uniform by Truck

MSU18 Cash Sales by Truck

MSU12 Delivery by Hand Cart

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MCRD Parris Island

Supply Chain Flow
Bulk Warehouse to
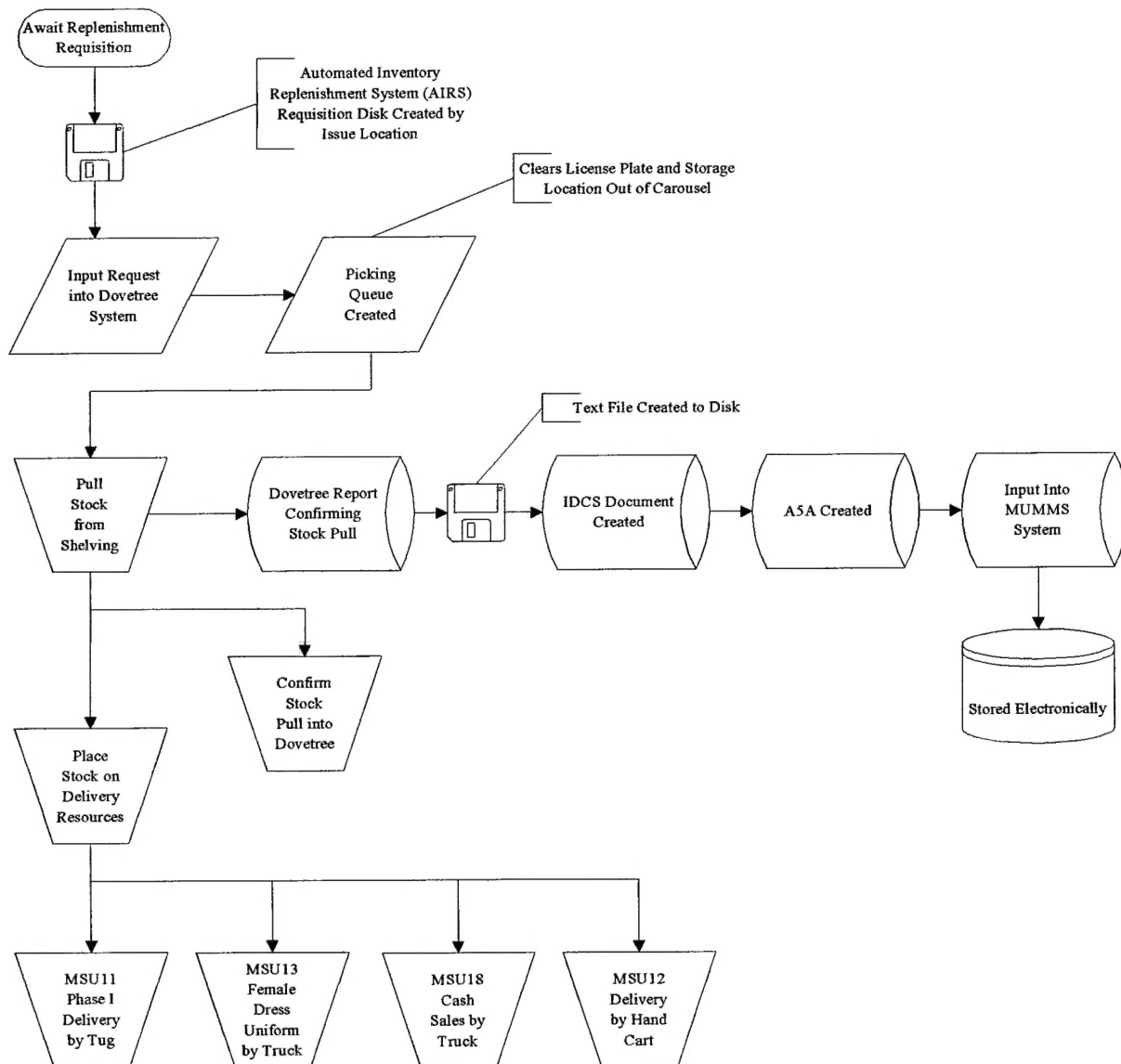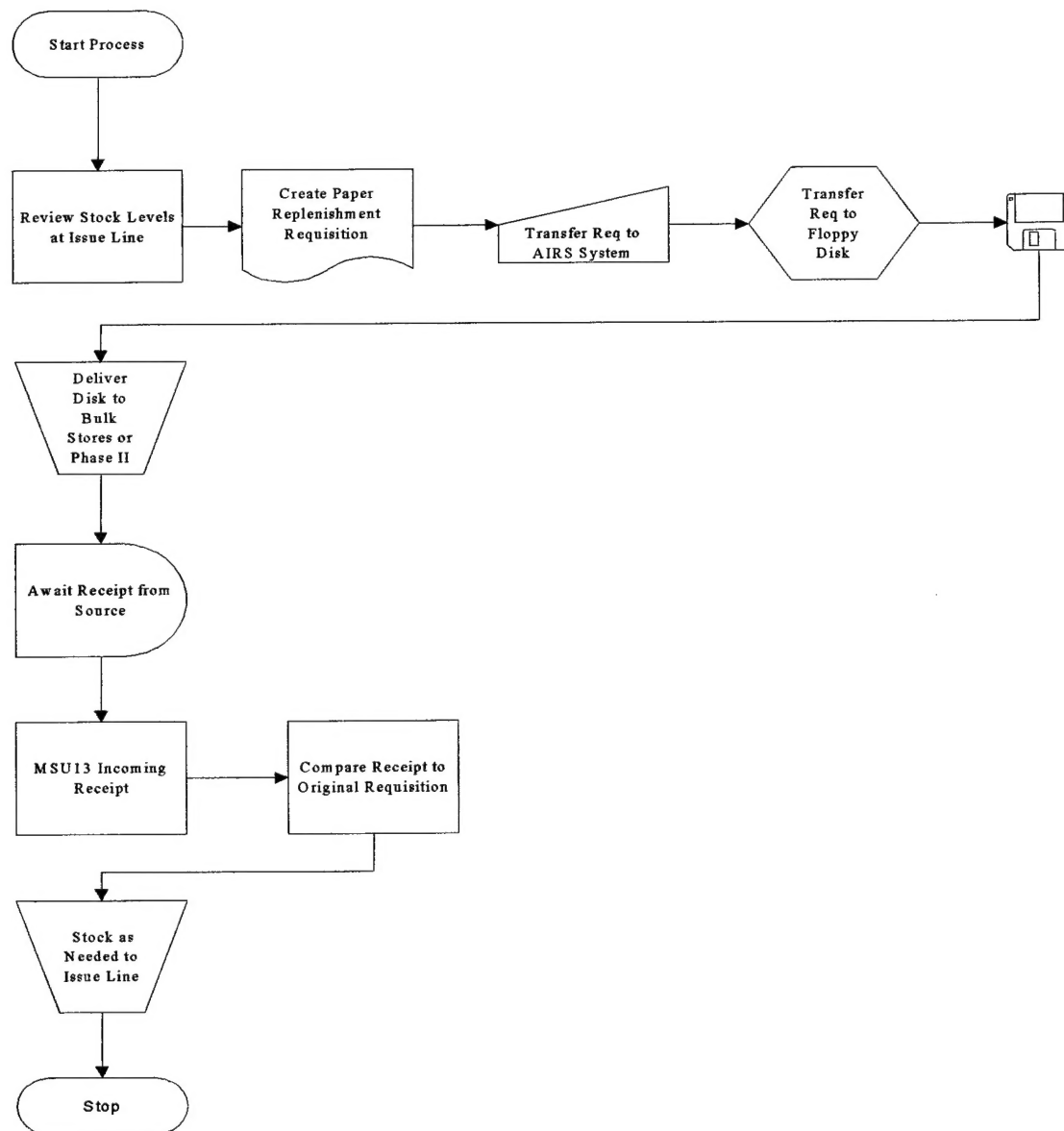Female Phase II Issue Point

MCRD Parris Island
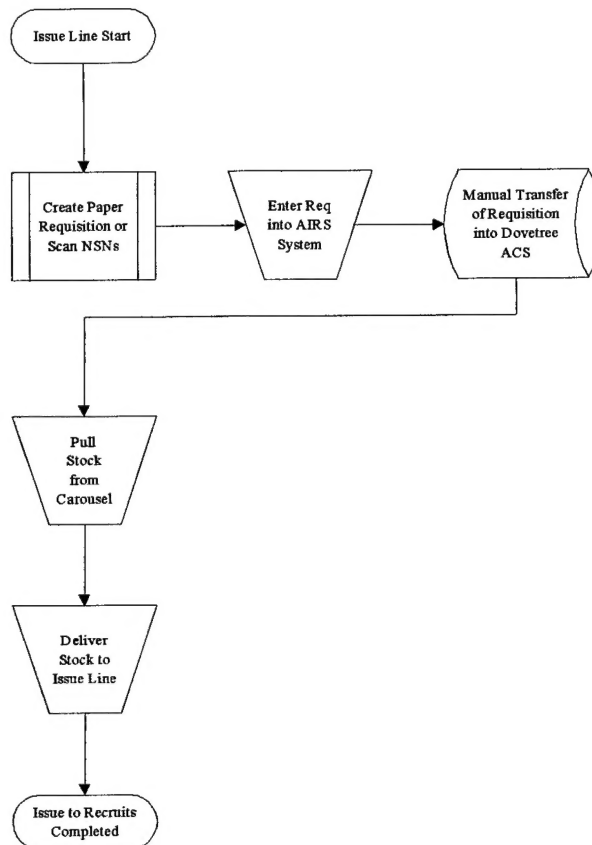Supply Chain Flow
Male Phase II Bulk to Issue Point

Issue Line Start

Create Paper Requisition or Scan NSNs → Enter Req into AIRS System → Manual Transfer of Requisition into Dovetree ACS

Pull Stock from Carousel

Deliver Stock to Issue Line

Issue to Recruits Completed

ADVANTECH
Technology for Competitive Performance

Marines Corps Recruit Depot
Parris Island, SC

Recruit Clothing Supply Chain Assessment
Appendices

MCRD Parris Island
Recruit Issue Funds Reconciliation

Note: Total issues valued on basis of number of recruits processed times bag value.